

CLAIMS

1. Device comprising two hollow profiles (10, 10_a) arranged approximately at right angles to one another, each of which has a profile channel (14) parallel to its profile longitudinal axis (A) and also, in at least one profile side surface (20), an undercut longitudinal groove (22) parallel to the profile channel (14), wherein the two hollow profiles (10, 10_a) are held together by a connecting screw (30, 30_a), the shaft (32) of which engages in the profile channel (14) of one hollow profile (10) and the screw head (36, 36_a) of which is mounted in an undercut longitudinal groove (22) of the other hollow profile (10_a), characterized in that the screw head (36, 36_a) is provided on its periphery with grooves or notches (43) which run in planes extending from the shaft longitudinal axis (M) and form ribs (44) between them.

2. Device according to Claim 1, characterized in that the screw head (36, 36_a) tapers conically towards a head surface (50, 50_a) remote from the shaft (32) and this wall surface (42) which is inclined at an angle (w) with respect to the shaft longitudinal axis (M) is provided with the grooves or notches (43) and ribs (44).

3. Device according to Claim 2, characterized by an angle (w) of approximately 45°.

4. Device according to any of Claims 1 to 3, characterized in that the screw head (36, 36_a) has, between a shaft-facing connection surface (38) and the inclined wall surface (42), an annular section (40) of constant diameter (g) in which the shaft-facing ends of the notches (43) and of the ribs (44) form a crenellated edge pattern (45).

5. Device according to any of Claims 1 to 4, characterized in that the inclined wall surface (42) ends

at a radial step surface (46) and the latter surrounds in an annular manner an integrally formed top body (48) of the screw head (36), said top body (48) having a head surface (50) (Fig. 2).

6. Device according to any of Claims 1 to 4, characterized in that the inclined wall surface (42) ends at the head surface (50_a) of the screw head (36_a) (Fig. 4).

7. Device according to Claim 5 or 6, characterized in that a polygonal socket (49) is provided in the head surface (50, 50_a).

8. Device according to any of Claims 1 to 7, characterized in that the shaft (32) of the connecting screw (30, 30_a) is provided with a cutting thread (34).

9. Device according to any of Claims 1 to 8, characterized in that assigned to the shaft (32) of the connecting screw (30_a) is a slip-on collar (70) which is provided with a central opening (74) and can be placed against the connection surface (38) of the screw head (36_a), the width (b₁) of said slip-on collar being shorter than the width (b) of the longitudinal groove (22) of the hollow profile (10, 10_a).

10. Device according to Claim 9, characterized by a collar piece (72) which is integrally formed on a base strip (71) of the slip-on collar (70), wherein the length (c) of the base strip is greater than the width (b) of the longitudinal groove (22) of the hollow profile (10, 10_a).

11. Device according to Claim 10, characterized in that a threaded sleeve (80) with outer thread (84) is axially assigned to the collar piece (72) of the slip-on collar

(70), said threaded sleeve receiving the free end of the shaft (32).

12. Device according to Claim 11, characterized in that the shaft (32) and the threaded sleeve (80) form a secure unit in the installed position.

13. Device according to Claims 10 and 11, characterized in that the length (i) of the shaft (32) corresponds approximately to the height (i_1) of the slip-on collar (70) plus the length (k) of the threaded sleeve (80).

14. Device according to Claim 10 or 13, characterized in that an axially oriented widening (76) of the opening (74) is integrally formed in the lower surface (73) of the base strip (71) in order to temporarily receive a region of the annular section (40) of the screw head (36, 36_a).

15. Device according to any of Claims 11 to 14, characterized in that the outer diameter (g_2) of the threaded sleeve (80) corresponds approximately to the width (b_1) of the slip-on collar (70).

16. Tool for operating the connecting bolt (30, 30_a) according to at least one of the preceding claims in a screw head (36, 36_a) arranged in a groove space (26) of a hollow profile (10_a), characterized in that an insertion head (56) is integrally formed at one end in a round profile (54), said insertion head having longitudinal notches (58) in its peripheral surface (57).

17. Tool according to Claim 16, characterized in that the diameter (q) of the round profile (54) of the tool (52) is shorter than the depth (e) of the groove space (26) of the hollow profile (10, 10_a).

18. Tool according to Claim 16 or 17, characterized in that the peripheral surface (57) of the insertion head (56) tapers conically.

19. Tool according to Claim 18, characterized by an angle (γ) between the axis (Q) of the round profile (54) and the peripheral or outer surface (57) of the insertion head (56) of approximately 20° to 40°, in particular of approximately 25°.

20. Tool according to any of Claims 16 to 19, characterized in that a protective section (66) of a protective surface (60) bears against the peripheral or outer surface (57) of the insertion head (56), said protective surface being releasably fixed to the round profile (54).

21. Tool according to Claim 20, characterized in that the protective surface as a protective plate (60) has a holding section (62) which is radial with respect to the axis (Q) of the round profile (54) and surrounds the latter and also a lateral section (64) which is bent out from the surface of said holding section, on which lateral section the protective section is integrally formed in an inclined manner.

22. Tool according to Claim 21, characterized in that the lateral section (64) runs at a radial distance from the round profile (54).